CLAIMS

1. A call server for use in a connectionless, packet, communications network in order to provide admissions control, said communications network comprising a plurality of middleboxes, each middlebox being associated with a different link in the communications network and arranged to control packet flow over that link, said call server comprising:-

    (i)   an input arranged to receive a call admission request from an originating packet media endpoint, said call admission request comprising information about the originating packet media endpoint, and a destination packet media endpoint;

    (ii)   an input for accessing information about all first middleboxes associated with the originating node and all second middleboxes associated with the destination node, together with information about the amount of available bandwidth on the link associated with each of those middleboxes;

    (iii)   a processor for determining whether to accept the call admission request on the basis of the accessed information about available bandwidth;

    (iv)   an output arranged to output the results of the determination as to whether to accept the call admission request.

2. A call server as claimed in claim 1 wherein said processor is arranged to determine whether to accept the call admission request on the basis of the accessed information about available bandwidth together with information about the bandwidth requirements for the call.

3. A call server as claimed in claim 1 wherein said processor is further arranged to determine whether all the first middleboxes are the same as all the second middleboxes and to accept the call admission request in such cases.

4. A call server as claimed in claim 1 wherein said processor is further arranged to identify which of the first middleboxes are

not also second middleboxes and vice versa, and wherein said processor is arranged to determine whether to accept the call admission request on the basis of accessed information about available bandwidth only for links associated with those identified middleboxes.

5.   A method of performing admissions control in a connectionless, packet, communications network, said communications network comprising a plurality of middleboxes, each middlebox being associated with a different link in the communications network and arranged to control packet flow over that link, said method comprising the steps of, at a call server:-

(i)   receiving a call admission request from an originating packet media endpoint, said call admission request comprising information about the originating packet media endpoint and a destination packet media endpoint;

(ii)   accessing information about all first middleboxes associated with the originating packet media endpoint and all second middleboxes associated with the destination packet media endpoint, together with information about the amount of available bandwidth on the link associated with each of those middleboxes;

(iii)   determining whether to accept the call admission request on the basis of the accessed information about available bandwidth; and

(iv)   outputting the results of the determination as to whether to accept the call admission request.

6.   A method as claimed in claim 5 wherein said step (iii) of determining comprises determining whether to accept the call admission request on the basis of the accessed information about available bandwidth together with information about bandwidth requirements for the call.

7.   A method as claimed in claim 5 which further comprises determining whether all the first middleboxes are the same as

all the second middleboxes and accepting the call admission request in such cases.

8. A method as claimed in claim 5 which comprises identifying which of the first middleboxes are not also second middleboxes and vice versa, and wherein said step (iii) of determining whether to accept the call admission request is made on the basis of accessed information about available bandwidth only for links associated with those identified middleboxes

9. A method as claimed in claim 5 wherein said communications network is selected from an internet protocol communications network and a voice over asynchronous transfer node communications network.

10. A method as claimed in claim 5 wherein said originating packet media endpoint is selected from a media gateway and an internet protocol endpoint.

11. A method as claimed in claim 5 wherein said information about bandwidth requirements for the call comprises session description protocol (SDP) information received from both the originating and destination packet media endpoints.

12. A method as claimed in claim 5 wherein said information about bandwidth requirements for the call comprises information about one or more codecs to be used in the call.

13. A method as claimed in claim 5 wherein said call is a conference call to be established using a conferencing service in the communications network.

14. A method as claimed in claim 5 wherein said communications network comprises two or more call servers, and wherein said method further comprises: receiving said call admission request at an origination call server associated with the origination packet media endpoint and determining whether a destination call server, associated with the destination packet media endpoint is the same as the origination call server.

15. A method as claimed in claim 14 wherein said determination indicates that the destination call server and the origination call server are different and in that case, allowing the origination and destination packet media endpoints to negotiate as to a codec to be used for the call and to send information about that codec to both the origination and destination call servers.

16. A method as claimed in claim 15 wherein both the origination and destination call servers determine an indication of bandwidth requirements for the call based on the codec information.

17. A method as claimed in claim 16 wherein for all middleboxes associated with the origination packet media endpoint, the origination call server accesses information about available bandwidth and for all middleboxes associated with the destination packet media endpoint, the destination call server accesses information about available bandwidth.

18. A method as claimed in claim 17 wherein the destination call server and the origination call server determine whether to accept the call on the basis of the information about available bandwidth.

19. A method as claimed in claim 5 wherein if the call request is refused, instructions are sent to the origination packet media endpoint to provide a refusal indication to a calling party terminal which initiated the call request.

20. A method as claimed in claim 5 wherein if the call request is accepted, the database of middlebox information is updated with information about the call and updated again when that call ends.

21. A method as claimed in claim 5 wherein one or more of said middleboxes are arranged to perform call admission control themselves under MIDCOM protocol control.

22. A communications network comprising at least one call server as claimed in claim 1.

23.   A communications network as claimed in claim 22 and wherein every originating and every destination packet media endpoint connected to a particular middlebox is controlled by the same call server.

24.   A computer program arranged to control a call server such that the method of claim 5 is carried out.

25.   A computer program as claimed in claim 24 which is stored on a computer readable medium.